

# Sverdrup

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**Sverdrup Corporation**

801 North Eleventh  
St. Louis, Missouri 63101  
314/436-7600  
TWX: 910-761-1085  
Cable: SPECO St. Louis

February 4, 1986

Cerro Copper Products Company  
P.O. Box 681  
East St. Louis, Illinois 62202

Attention: Mr. Paul Tandler  
Vice President - Manufacturing

Dear Mr. Tandler:

We have reviewed the material you provided relative to the Dead Creek Project. As it applies to Cerro Copper it appears that Ecology and Environment, Inc. (E&E) is planning a study that will include evaluation of surface and ground water, soil/sediment and air.

The preliminary investigation will entail magnetometry and electromagnetic conductivity. This study will be followed by sampling the media indicated above.

Sverdrup Corporation proposes to assist Cerro Copper by acting as the owners' observer during these activities. Our observers would:

1. Accept and maintain custody of samples split with E&E.
2. Collect photographic data of site operations.
3. Maintain a written record of daily site operations for comparison with the E&E Technical Proposal.
4. Receive any daily reports or other material that E&E must submit to Cerro as a result of any presurvey negotiations.
5. Submit split samples to an acceptable laboratory to duplicate analyses if desired by Cerro.

Our observers would only be in Level D protective clothing. They would provide no information, guidance or assistance to the E&E team and would direct any inquiries to your designated representative. They would have environmental or geotechnical engineering and science experience as appropriate. Resumes of typical candidates are attached.

We propose to provide these services on a cost reimbursable basis described in the attached "Standard Contract Provisions - Terms of Payment - Cost Reimbursable Basis" with salary costs multiplied by a factor of 2.15 to cover overhead and profit.

C284-24

Mr. Paul Tandler  
February 4, 1986  
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For many years Sverdrup has maintained a substantial amount of professional liability insurance to cover claims which might arise from engineering or architectural errors and omissions. However, the policy covering this coverage excludes claims resulting from express warranties and guarantees. We occasionally find that clients accept our proposal by issuing a standard purchase order requesting us to proceed with the services which we have proposed. Often, these purchase orders contain provisions requiring indemnification and/or warranties. Without exception they have agreed that these provisions were meant to apply to the purchase of goods and merchandise rather than professional services and permitted the amendment or deletion of them.

In order to forestall the possibility of time consuming correspondence with respect to those provisions, we propose in advance that if your purchase order issued in response to this proposal contains such language that it be modified in the following respects:

The warranty paragraph or any similar paragraph shall be deleted and replaced by the following:

#### STANDARD OF CARE

Sverdrup agrees that it will exercise the skill and care which would be exercised by comparable professional architects and engineers performing similar services at the time and in the locality such services are performed. If the failure to meet these standards results in faulty work by Sverdrup, Sverdrup shall redesign at its own expense, the corrective adjustments or modifications.

The indemnity paragraph shall be deleted and replaced by the following:

#### INDEMNITY

Sverdrup shall indemnify and hold the buyer harmless from all cost, expense, damages and liability arising out of injuries to persons or property resulting from the errors, omissions, or negligent acts of Sverdrup. Sverdrup shall obtain and maintain, at its expense, during the term of this order, such insurance as shall be reasonably necessary to protect the interests of the buyer, providing the buyer with thirty days prior written notice of any cancellation or reduction of coverage.


Your issuance of a purchase order in response to this proposal shall be deemed to be an acceptance of these modifications. In the event this is not your intent, please indicate your nonacquiescence so that we might have an opportunity to discuss these matters with you.

Mr. Paul Tandler  
February 4, 1986  
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We appreciate the opportunity to present this proposal and look forward to working with you on this project. Please contact me if you should need additional information.

Sincerely,

SVERDRUP CORPORATION

  
Jules B. Cohen, Ph.D.  
Vice President

Attachment

ACCEPTED BY:      Name \_\_\_\_\_  
                                 Title \_\_\_\_\_  
                                 Date \_\_\_\_\_

cc: Sandy A. Silverstein, Cerro Copper Products  
Dr. J. W. Patterson, PAI

# **SVERDRUP CORPORATION - STANDARD CONTRACT PROVISIONS**

## **TERMS OF PAYMENT - COST REIMBURSEMENT BASIS**

### **A. SALARY COSTS, OVERHEAD & PROFIT**

As compensation for our services, we will be reimbursed for the salary costs of our professional, technical and supporting personnel for the time during which they are directly employed in work covered by this agreement, multiplied by a factor of 2.15 to cover overhead and profit.

1. Salary costs are defined as the salaries paid to the above-mentioned persons for regular time and overtime (including any premium overtime) worked, plus provision for applicable annual salary related expenses, including sick leave, vacation pay, holiday pay, standard annual bonuses, the employer's portion of social security, unemployment and other payroll taxes, Employee's Retirement and Benefit Plan contributions, employer's portion of group hospitalization and medical insurance, and the cost of workmen's compensation insurance.
2. Included in overhead are:
  - (a) The salary costs and other compensation of officers or partners, except for technical or advisory services directly applicable to the project.
  - (b) The salary costs and other compensation of employees doing general administrative work; also nonproductive professional and technical salary costs and other compensation, including maintenance of staff to provide readiness to serve.
  - (c) Rent and costs of light, heat and water; equipment depreciation and maintenance cost; costs of office supplies and reproduction of data for our internal use; general communications expense, including local telephone calls and postage; taxes; general insurance and license fees; automotive expense and other transportation and travel expense not chargeable to specific contracts; and other miscellaneous costs.

### **B. OTHER REIMBURSABLE COSTS**

In addition, we will be reimbursed for the following:

1. The cost of travel, subsistence, and incidental expenses of personnel while traveling in connection with the work. The costs of a change of employee's residence are reimbursable if required by the work.

2. Transportation by passenger automobiles that we lease or own and supply in connection with the work, at the rate of 20 cents per mile. All costs of rented passenger vehicles that are supplied are reimbursable. Reimbursement for the cost of special types of vehicles will be at rates to be mutually agreed upon when such vehicles are required.
3. The cost of reproduction of drawings, photographs, maps, charts and reports which are prepared for the Client's periodic or interim review and also the cost of the reproductions which constitute the delivery of work.
4. The cost of all wire and wireless communication of messages and data in connection with the work.
5. The cost of insurance required by the Client in addition to the coverages or in excess of the limits normally carried.
6. The cost of subcontracted services such as, but not limited to, borings, surveys, photogrammetry, testing and computing services, if required in the performance of the work, plus an amount equal to 10% thereof to cover cost of handling.
7. The cost of technical support services provided from our own facilities, as required in the performance of the work.
8. The cost of special consultants, as approved by the Client, if required in the performance of the work, plus an amount equal to 10% thereof to cover the cost of handling.
9. Technical and advisory services of officers or partners directly applicable to the project at the hourly rate of \$100.00.

### **C. TERMS OF PAYMENT**

Invoices for actual work performed and cost incurred will be submitted at four-week intervals with payment due upon presentation. Interest of 1½% per month (or any lesser legal limit applicable) will be charged on invoice amounts outstanding more than 45 days from invoice date.

. . . . .

The above provisions are predicated on the work being performed in our regularly established offices and may be subject to revision if separate offices are necessary for project purposes.

MURRAY L. MEIERHOFF

Environmental Scientist

Specialized Professional Competence

Hazardous waste impact assessment, including coverage under RCRA and CERCLA  
Water quality surveys and assessment  
Water quality standards review  
NPDES discharge permit limitations compliance studies  
Field sampling

Representative Project Assignments

Performed a site investigation of a suspected hazardous waste dump in western Tennessee to establish the presence and extent of buried drums and associated groundwater contamination  
Conducted an assessment of an industrial wastewater treatment system in Mississippi to determine whether the system was subject to RCRA regulations, and whether a waiver provision could be obtained  
Maintained an update file on all amendments and changes to RCRA and CERCLA

Representative Project Assignments for Others

Review and revision of State of Iowa's water quality standards as a member of the Iowa Water Quality Review Subcommittee  
Participant in the State of Iowa's Section 208 non-point source runoff surveys of small- and medium-size watershed basins in rural Iowa  
Field sampling to determine NPDES discharge permit compliance of numerous industrial and municipal wastewater treatment facilities in Iowa  
Collection, identification, and data interpretation of water, fish, and benthic macroinvertebrate samples to assess possible impacts from hazardous waste site leachate on the Cedar River, Charles City, IA  
Collection of samples from municipal wells to assess possible health hazards from hazardous waste site leachate to inhabitants of Waterloo, IA  
Preliminary acute bioassays on fathead minnows to determine relative toxicity of contaminants present in municipal well water samples in Waterloo, IA

Professional Background

MA in Aquatic Biology and BA in Zoology - University of Missouri-Columbia, 1977 and 1974  
Entered the profession in 1977; joined Sverdrup in 1981  
Numerous professional publications  
Member - North American Benthological Society  
Past Member - Iowa Water Quality Standards Revision Subcommittee (1980) of the Iowa Water Quality Commission

STEVEN M. HORNUNG

Environmental Engineer

Specialized Professional Competence

Wastewater treatment  
Water treatment  
Activated aluminum adsorption  
Hazardous waste regulations  
Water, wastewater and hazardous waste sampling

Representative Project Assignments

Project Engineer for contamination assessment and remedial action  
at railroad fueling facility, Dupo, Illinois  
Design Engineer on potable water treatment and distribution system  
at Anheuser-Busch land application site, Jacksonville, FL  
Project Engineer for hazardous waste audits at industrial plants,  
St. Louis, MO  
Engineer for design of 27-mgd Missouri River secondary treatment  
plant, Metropolitan St. Louis Sewer District (MSD), St. Louis, MO

Representative Project Assignments for Others

Engineer performing preliminary assessments and site inspections  
at potential hazardous waste sites, Mississippi and Alabama  
Prepared site safety and sampling plans for hazardous waste  
inspections, Mississippi and Alabama  
Project engineer for design of recycling system for process water  
at veneer manufacturer, Waynesboro, MS

Professional Background

Missouri Engineer in Training  
MS and BS in Civil Engineering - University of Missouri-Columbia,  
1984 and 1982  
Technical presentation on removing selenium from drinking water by  
adsorption using activated aluminum at the AWWA Convention, 1983  
Entered the profession in 1984 and joined Sverdrup in 1985  
Member - American Society of Civil Engineers  
- American Water Works Association  
- Water Pollution Control Federation

February 4, 1986 (Revised 11/5/86)

Cerro Copper Products Company  
P.O. Box 681  
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Attention: Mr. Sandy Silverstein  
Manager, Energy and Environmental Affairs

Dear Mr. Silverstein:

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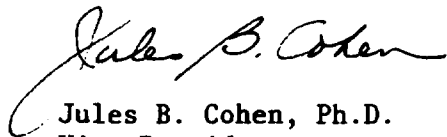


Mr. Sandy Silverstein  
February 4, 1986 (Revised 11/5/86)  
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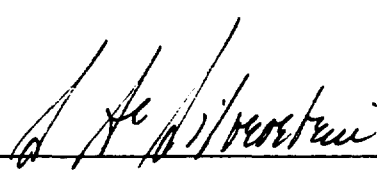
We appreciate the opportunity to present this proposal and look forward to working with you on this project. Please contact me if you should need additional information.

Sincerely,

SVERDRUP CORPORATION

  
Jules B. Cohen, Ph.D.  
Vice President

Attachment

ACCEPTED BY: Name   
Title \_\_\_\_\_  
Date 11/12/86

LARRY J. OLIVER

Project Engineer, Environmental Division

Specialized Professional Competence

Municipal and industrial wastewater treatment  
Environmental studies and preparation of regulatory documents  
Sewer system design  
Project management  
Plant start-up

Representative Project Assignments

Project engineer for:

Preliminary and final design of 28-mgd Missouri River Wastewater Treatment Plant for Metropolitan St. Louis Sewer District (MSD), MO  
Design of 6.8-mile Creve Coeur Creek interceptor sewer for St. Louis MSD  
Design of 1.5-mgd industrial wastewater pretreatment facility, 3,000 gpm pumping station, and 12-inch force main for Monsanto Chesterfield Village Research Center  
Design of 2.5-mgd wastewater treatment plant for St. Louis MSD, Caulks Creek watershed, St. Louis County, MO  
Effluent guidelines, new source performance standards, and pretreatment standards studies of textile mills industry for U.S. Environmental Protection Agency (EPA)  
Hazardous waste studies to assess impact of regulations under Resource Conservation and Recovery Act on textile mills industry for U.S. EPA  
Operations investigation and evaluation of design change alternatives for the sewage treatment system at Union Electric Co's Callaway County (MO) nuclear power plant  
Design responsibility during construction and start-up phases of the sewage treatment and potable water systems at Union Electric Co's Callaway County (MO) nuclear power plant  
Start-up assistance for:  
70-mgd Eugene-Springfield municipal secondary wastewater treatment facility in Eugene, OR  
6-mgd Miller Brewing Company industrial water treatment facility in Trenton, OH  
Preparation of operations manual supplement and industrial pretreatment program for expansion to City of Perryville, MO wastewater treatment plant  
Operations assistance for 80,000 gpd packaged treatment facility located at Union Electric Company nuclear power plant, Callaway County, MO

Representative Project Assignments for Others

Commissioned Officer, National Oceanic and Atmospheric Administration,  
U.S. Department of Commerce, 1970-1974

Professional Background

Registered Professional Engineer in Missouri  
MS in Engineering Management - University of Missouri, 1983  
MS and BS in Civil Engineering - University of Missouri, 1976 and 1970  
Entered the profession in 1970; joined Sverdrup in 1976  
Technical publication, Journal of the Water Pollution Control Federation, 1980  
Member - American Society of Civil Engineers  
- National Society of Professional Engineers  
- Water Pollution Control Federation  
- Engineer's Club of St. Louis

STEVEN M. HORNING

Environmental Engineer

Specialized Professional Competence

Water and wastewater treatment  
Activated alumina adsorption  
Hazardous waste regulations  
Water, wastewater, and hazardous waste sampling

Representative Project Assignments

Project manager for contamination assessment and remedial action feasibility study at railroad fueling facility, Dupon, IL  
Design engineer on potable water treatment and distribution system at Anheuser-Busch land application site, Jacksonville, FL  
Project engineer for hazardous waste audits at industrial plants, St. Louis, MO  
Engineer for design of 28-mgd Missouri River secondary treatment plant, Metropolitan St. Louis Sewer District (MSD), St. Louis, MO

Representative Project Assignments for Others

Engineer performing preliminary assessments and site inspections at potential hazardous waste sites, Mississippi and Alabama  
Prepared site safety and sampling plans for hazardous waste inspections, Mississippi and Alabama  
Project engineer for design of recycling system for process water at veneer manufacturer, Waynesboro, MS

Professional Background

Engineer-in-Training in Missouri  
MS and BS in Civil Engineering - University of Missouri-Columbia, 1984 and 1982  
Technical presentation on removing selenium from drinking water by adsorption using activated alumina at the AWWA Convention, 1983  
Entered the profession in 1984; joined Sverdrup in 1985  
Member - American Society of Civil Engineers  
- American Water Works Association  
- Water Pollution Control Federation  
- Hazardous Materials Control Research Institute

DAVID W. GUYAN

Field Technician

Specialized Professional Competence

Sampling of industrial and hazardous waste

Representative Project Experience

Sampling of soil and groundwater for PCBs, cyanides, phenols, and diesel fuel contamination for Missouri Pacific Railroad, Dupon, IL  
Sampling for comprehensive wastewater characterization study for Cerro Copper Products Company, including flow monitoring, sampling, and analysis of numerous waste streams, Sauget, IL

Representative Project Experience for Others

Engineering Field Technician with responsibilities including involvement with Management of Underground Storage Tanks (M.U.S.T.) survey, proposal writing and estimating, surveyed grid for soil excavation and sampling, soil sampling, water sampling, oil spill containment and cleanup, chemical spill emergency response, building decontamination and water treatment, excavation of soil at lagoon closure, performed on site work wearing level B and C protective clothing. Attended technical writing seminar

Professional Background

BS in Geological Engineering, University of Missouri - Rolla, 1984  
Entered the profession in 1984; joined Sverdrup in 1986

DENNIS F. BOLL

Geotechnical Engineer - Hydrologist

Specialized Professional Competence

Planning and supervising subsurface and groundwater investigations  
Geotechnical analyses and engineering  
Hazardous waste management and investigations

Representative Project Assignments

Project engineer for permit applications assistance at TRADCO, Inc.'s, Washington, MO landfill. Responsibilities included geotechnical investigations, installation of monitoring wells and recommendations for design and construction of landfills

Project engineer for hydrogeologic investigation involving mine tailings impoundment for a confidential client. Project included computer modeling, aquifer resource evaluation, and seepage analysis

Project engineer for groundwater and soil contamination investigations for a major chemical producer at plants in New Jersey, South Carolina, Illinois, Idaho, Texas, and Ohio. Mr. Boll has been involved full time on this assignment for the last 14 months. His work involves supervising soil, hazardous waste, and groundwater sampling; installation of monitoring systems; analyses of groundwater and contaminant flows; and geophysical studies. He is responsible for making recommendations for containment, and for maintaining site health and safety during the field investigations

Groundwater and soil contamination investigation at a manufacturing plant in southeastern Minnesota

Evaluation of existing hydrogeologic conditions surrounding a major chemical plant in Texas

Specialty sampling of offshore sediments prior to dredging operation in northern Indiana

Foundation investigation for additions to automobile manufacturing plants in central Ohio and northeastern Indiana

Evaluation of embankment designs for a sanitary landfill in Illinois

Professional Background

Engineer-in-Training, State of Missouri

MS in Geological Engineering with emphasis in geotechnical engineering and hydrogeology, University of Missouri, Rolla, 1982

BS in Geological Engineering (Magna Cum Laude), University of Missouri, Rolla, 1981

University of Missouri - Rolla, 1981-1982

Graduate Teaching Assistant in engineering geology, remote sensing and site evaluation, and subsurface exploration

Developed small calculator programs that quickly interpret and solve well pumping test data

Curators Scholar, 1977-1981

Chancellor's Fellow, 1981-1982

Entered the profession in 1982; joined Sverdrup in 1984

Member - Association of Engineering Geologists

- Missouri Society of Professional Engineers

- Tau Beta Pi, Phi Eta Sigma

# **SVERDRUP CORPORATION - STANDARD CONTRACT PROVISIONS**

## **TERMS OF PAYMENT - COST REIMBURSEMENT BASIS**

### **A. SALARY COSTS, OVERHEAD & PROFIT**

As compensation for our services, we will be reimbursed for the salary costs of our professional, technical and supporting personnel for the time during which they are directly employed in work covered by this agreement, multiplied by a factor of 2.15 to cover overhead and profit.

1. Salary costs are defined as the salaries paid to the above-mentioned persons for regular time and overtime (including any premium overtime) worked, plus provision for applicable annual salary related expenses, including sick leave, vacation pay, holiday pay, standard annual bonuses, the employer's portion of social security, unemployment and other payroll taxes, Employee's Retirement and Benefit Plan contributions, employer's portion of group hospitalization and medical insurance, and the cost of workmen's compensation insurance.

2. Included in overhead are:

(a) The salary costs and other compensation of officers or partners, except for technical or advisory services directly applicable to the project.

(b) The salary costs and other compensation of employees doing general administrative work; also nonproductive professional and technical salary costs and other compensation, including maintenance of staff to provide readiness to serve.

(c) Rent and costs of light, heat and water; equipment depreciation and maintenance cost; costs of office supplies and reproduction of data for our internal use; general communications expense, including local telephone calls and postage; taxes; general insurance and license fees; automotive expense and other transportation and travel expense not chargeable to specific contracts; and other miscellaneous costs.

### **3. OTHER REIMBURSABLE COSTS**

In addition, we will be reimbursed for the following:

1. The cost of travel, subsistence, and incidental expenses of personnel while traveling in connection with the work. The costs of a change of employee's residence are reimbursable if required by the work.

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8. The cost of special consultants, as approved by the Client, if required in the performance of the work, plus an amount equal to 10% thereof to cover the cost of handling.

9. Technical and advisory services of officers or partners directly applicable to the project at the hourly rate of \$ 100.00.

### **C. TERMS OF PAYMENT**

Invoices for actual work performed and cost incurred will be submitted at four-week intervals with payment due upon presentation. Interest of 1½% per month (or any lesser legal limit applicable) will be charged on invoice amounts outstanding more than 45 days from invoice date.

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